III. How may the Onward Progress of the Study of Entomology be best furthered? By H. T. Stainton, Esq.

[Read February 4th, 1856.]

HE who looks around him at the countless forms of insect life which meet his eyes on every side may well despair of ever obtaining an intimate knowledge of all these little creatures; the study of any one group would furnish him with occupation for life.

It is a common but erroneous notion, that to restrict one's investigations to a single group would have the effect of contracting one's ideas; if to know any thing thoroughly be an evil, it is an evil by no means widely disseminated; one person cannot know every thing, however clever and industrious he may be; he may be well informed on a great variety of subjects, but information is not knowledge. Information may be derived from books, or from conversation with others; knowledge is only obtained by our own actual study of the objects themselves.

A person may be narrow-minded and pedantic from an excess of information, having a superficial knowledge of a variety of subjects but no thorough knowledge of any; but unless the mind of the individual be very singularly constructed, no amount of thorough knowledge will induce prejudiced and one-sided views.

It is utterly impossible for any person to penetrate deeply into any one branch of study without finding that he is obliged to make himself acquainted with many collateral branches, which bear more or less immediately upon the object of his attention. And from the very fact of his having penetrated deeply into the mysteries of some branch of knowledge, he is well aware of the limited extent of his knowledge of these collateral branches, in which probably he knows more than many a well-informed man who considers himself to have a good knowledge of every thing. And the student, considering himself very ignorant on such a subject, is surprised to find that those who are evidently more ignorant than himself should consider themselves very learned.

But whilst enunciating as an axiom that actual knowledge can only be obtained by perseveringly pursuing some particular branch of study during a long series of years, it may well be urged, is it not better to content one's-self with a general information than to penetrate into these mysteries, where we at once find ourselves at a depth where our labours are hardly appreciated by any of our acquaintance? .

By no means: the bee rifles the flower of its honey not for its own immediate pleasure and enjoyment, but in order that it may be carried home and added to the common store for the future use of the community: the bee swallows the honey, and afterwards regurgitates it into a cell prepared for its reception; so must it be with the scientific student,-he must probe science to her innermost recesses, (he must remember that the bee buries herself in the corolla of some tubular flower,) and having acquired an amount of knowledge by the actual investigation of objects themselves, he must arrange and classify the knowledge so obtained, and then, having thoroughly digested it, he must reproduce it in a simple, intelligible form, so that those who have not time to pursue for themselves the peculiar branch of study to which he is devoted, may yet be able to derive advantage from his labours; just as the bees which remain occupied in the hive are benefited by the honey collected by those which go abroad.

Each student thus adds not only to his own knowledge, but also to the information of many others, and he in turn will derive an excess of gratification and pleasure from the labours of other students in different branches of science, far above that which the generally well-informed man derives from the same labours.

It may be that it will sometimes happen that the student, who has penetrated the hidden mysteries of some branch of science, will selfishly content himself with enjoying the sweets of knowledge, without endeavouring to make others partakers of his good cheer: either from laziness, egotism or a feeling of contempt for those beneath him, he may be inclined either to keep his knowledge entirely to himself, or else to publish it in such a form that it can only be comprehended by those almost as conversant with the subject as he happens to be himself. Such feelings should be carefully guarded against, as, if once they find entrance, they would be apt to increase in the mind of the student and to diminish his usefulness.

In the course of the next few years we shall probably see a large increase in the crop of Entomological students, and it is of very great importance to the progress of science that each individual should not attempt too much, but should devote his energies and attention to some comparatively limited group. If twenty individuals were each to master a separate group of some of the

many of the insect tribes that have as yet been little explored, and if each were to elaborate the knowledge he obtained so as to make it available to the community, who can doubt that a vast impetus would be given to the onward progress of our science, and that it would advance by rapidly accelerating strides?

Each investigator of any particular group becomes at once a focus to which all chance observations by others are referred; it is thus that, in looking through Mr. Smith's "Monograph of the British Bees," we find that it condenses not merely his own observations during twenty years, but also a mass of extraneous observations made by others, themselves unaware of their value, but which, being communicated to Mr. Smith, were at once recognised by him as supplying some important link in the chain of information he was collecting.

And this alone is no slight help to the progress of Entomology. Every year and during the season, one may say every day, a number of observations are made, some merely repetitions of such as had been often made before, some confirmatory of facts which rested only on the evidence of single observations, some made for the first time. Many, very many of these never get recorded; the observers are not aware of their value. But, let each branch of the extensive circle of Entomology have its special investigator, and each observer can at once refer to him any fact which has struck him, bearing, or supposed to bear, upon his special subject; and though we can never expect that every observation made will be rendered available, we may reasonably expect that the number of observations which at present fall still-born to the ground will be reduced.

The substance of the deductions arrived at, in the progress of this inquiry, is as follows.

1. Let each student of Entomology restrict himself to some limited field of investigation.

2. Let each make known the object of his peculiar predilections and encourage general observers to communicate to him

any facts bearing upon it.

3. Let each, as soon as he has acquired and digested a sufficient amount of knowledge, publish it in an intelligible form, not restricting himself solely to details, but wherever opportunities occur, generalising the subject as much as the extent of his knowledge will permit.

Immediately this third point has been reached on any one branch, it will give a vast impetus to its study, and will render the co-operation of observers more active and also more serviceable, each seeing to what especial point his attention should be directed.

If, instead of pursuing the course here pointed out, each individual were to content himself with a general information on a variety of subjects, it would be utterly impossible to make any real progress, for each observation that happened to be made would be comparatively useless, there being no one to whom to refer, in order to ascertain whether it was of any value or not. When this is borne in mind it can hardly excite our wonder that Entomology should hitherto have progressed with such painful slowness, and it may indeed cause surprise that so much time should have been spent in elaborating theories, whilst a collection of facts on which alone theories ought to have been founded was disregarded.

The first step in the progress of our investigations in any branch of our science is to draw a line of demarcation between what is known and what is not known.

The student who is earnestly at work will never be anxious that any discoveries he may make should be especially recorded as his discoveries; his object is that all new discoveries be recorded and made generally available, not for the enhancement of his own honour, but for the furtherance of science; for however numerous may be the new observations he may make, or the connecting links in the arrangement of groups which he may be the first to seize, he will bear in mind that his talents of observation and perception are but given to him for a definite purpose, and he cannot but remember the inquiry—

"What hast thou, that thou did'st not receive?

Now if thou did'st receive it, why boastest thou
Thyself, as though thou had'st not received it?"

The earnest and truth-seeking student will never cavil at another for reproducing his ideas, even if he do so without acknowledgment; a third party might make such complaint with a good grace, but never the individual supposed to be aggrieved. To complain querulously that another has published his ideas, would lead one strongly to infer that he did not pursue science for its own sake, but for the sake of some honour or distinction it might confer.

And the student who enters upon a long course of investigations will not be disheartened or dismayed by the reflection that in all probability he will never live to complete them; his object is to be "doing something," whether he ever bring that which he is doing to completion or not; if he leaves his work unfinished, others will rise up after him and resume the thread of his labours and carry the good work onward; but whilst we contend that there is no room for faint-heartedness in considering the shortness and uncertainty of life, we must not forget to draw from it the wholesome lesson of doing at once what we have in our power to do, and not delaying and postponing this or that investigation for "a more convenient season" that may never come.

IV. Descriptions of New Genera and Species of Asiatic Longicorn Coleoptera. By F. P. PASCOE, Esq., F.L.S., &c.

[Read 3rd March, 1856.]

The collections of insects recently sent to this country by Mr. Wallace from Malacca and Borneo are especially rich in the longicorn *Coleoptera*, the greater part being new to Entomologists. The more remarkable I now bring to the notice of the Society, and to these I have added a few others yet undescribed collected by Mr. Fortune in North China.

BLEMMYA.

Maxillary palpi shorter than the labial, with the terminal joints in both rounded; mandibles produced; antennæ short, with the basal joint thick and longer than the third, the sixth to the eleventh widely dilated on one side; thorax unarmed, rounded, wider behind; elytra depressed; legs short, robust.

A remarkable genus, whose nearest affinity appears to be with Mallosoma.

Blemmya Whitei. (Pl. XVI. fig. 6.)

B. atra; scutello albo; elytris atris, carinatis, fascià angusta alba, in singulis interruptà. Borneo.

Black, thickly and roughly punctured, a fringe of white appressed hairs on the posterior margin of the prothorax, but interrupted as they approach the scutellum, and not continuous be-